

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Inventor | : | Noriyuki OHSAWA et al. |
| U. S. Patent No. | : | 7,266,129 |
| Serial No. | : | 09/661,737 |
| Issued | : | September 4, 2007 |
| For | : | COMMUNICATION LINE CONTROL... |

October 18, 2007

Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR A CERTIFICATE OF CORRECTION

SIR:

We request a Certificate of Correction to add the following **References Cited**, on the front page of the Patent Specification since these were cited by examiner in the Office Action dated August 18, 2004, which was omitted. Please add: **US 5,134,652** and **5,852,405**.

Also, we request a Certificate of Correction under 35 U.S.C. §254, to correct Column 14, line 64, which was incorrectly listed as “... **communication liner**; ...” Please change the same to read: “... **communication lines**; ...”

Attached, please find a copy of the Notice of References Cited, a copy of the front page of the Patent Specification and the page with column 14, line 64.

This was due to an error made by the USPTO.

Any fee due as a result of this paper, may be charged to Deposit account No. 50-1290.

Respectfully submitted,

/Nathan Weber/

Nathan Weber
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Docket No.: FUJY 17.750(100794-11494)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,266,129
APPLICATION NO.: 09/661,737
ISSUE DATE : September 4, 2007
INVENTOR(S) : N. OHSAWA

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(1) Title Page, Item (56) the following documents need to be added to the References Cited:

--(56) References Cited

U.S. PATENT DOCUMENTS

5,134,652
5,852,405

(2) Column 14, line 64: "Communication liner;" should be indicated as -- --communication lines;-- --.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

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This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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|-----------------------------------|---------------------------------------|---|-------------|
| Notice of References Cited | Application/Control No. 09/661,737 | Applicant(s)/Patent Under Reexamination OHSAWA ET AL. | |
| | Examiner Christine Ng | Art Unit 2663 | Page 1 of 1 |

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| * | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
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| A | US-5,134,652 | 07-1992 | Brown et al. | 379/163 |
| B | US-5,852,405 | 12-1998 | Yoneda et al. | 340/825.02 |
| C | US- | | | |
| D | US- | | | |
| E | US- | | | |
| F | US- | | | |
| G | US- | | | |
| H | US- | | | |
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| J | US- | | | |
| K | US- | | | |
| L | US- | | | |
| M | US- | | | |

FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|--|---|
| U | | |
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| W | | |
| X | | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



US007266129B1

(12) **United States Patent**
Ohsawa et al.(10) Patent No.: **US 7,266,129 B1**
(45) Date of Patent: **Sep. 4, 2007**(54) **COMMUNICATION LINE CONTROL SYSTEM**6,005,847 A * 12/1999 Gilbert et al. 370/264
6,128,293 A * 10/2000 Pfeiffer 370/359
6,567,418 B1 * 5/2003 Farah 370/437(75) Inventors: Noriyuki Ohsawa, Kawasaki (JP);
Isamu Kitagawa, Kawasaki (JP);
Munetaka Sakata, Kawasaki (JP)

FOREIGN PATENT DOCUMENTS

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(73) Assignee: Fujitsu Limited, Kawasaki (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 429 days.

* cited by examiner

Primary Examiner—Chau Nguyen
Assistant Examiner—Christine Ng
(74) Attorney, Agent, or Firm—Katten Muchin Rosenman LLP

(21) Appl. No.: 09/661,737

(22) Filed: Sep. 14, 2000

(57) **ABSTRACT**(30) **Foreign Application Priority Data**

Nov. 4, 1999 (JP) 11-313927

(51) Int. Cl.
H04J 3/16 (2006.01)

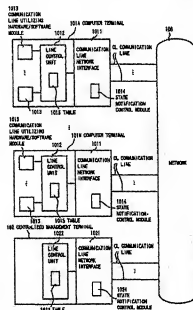
(52) U.S. Cl. 370/437; 370/463

(58) Field of Classification Search 370/437,
370/438, 439, 449, 462, 463

See application file for complete search history.

(56) **References Cited****U.S. PATENT DOCUMENTS**4,958,343 A * 9/1990 Abramovici et al. 370/439
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A communication line control system and a communication line control method have an architecture, in which if a plurality of calls that should be processed simultaneously occur in one communication terminal incorporating communication functions containing voice communications and data communications and accommodating a plurality of communication lines, a distributed control module utilizing the plurality of communication lines on this communication terminal processes only a specified call among the plurality of calls on the basis of condition data preset in a line control unit without being aware of the plurality of communication lines. With this architecture, it is feasible to enhance a general-purpose characteristic and a simplicity of creation of the software (distributed control module) for controlling the plurality of communication lines, reduce a load thereof and improve its usability.

5 Claims, 9 Drawing Sheets

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exceeds a response value preset in the management table 1015 of the line control unit 1012 in the transmission/receipt of the state notification to and from other terminal, the centralized management terminal 3 is notified of the state so that the management of the lines dealt with by the self-terminal is switched over to the centralized management, and also notified of a request for the line control. Thereafter, if the communication occurs on the line related to the computer terminal 1, the centralized management terminal 3 controls the line.

OPERATIONAL EXAMPLE 7

Next, an operational example 7 will be discussed referring to FIGS. 1, 2 and 9 in combination. If the line control unit 1012 of the computer terminal 101 falls into an inoperable state such as a cut-off of the power source of the computer terminal 101, the network interface 1011 operable by a power supply from the network 100 and a local power supply notifies other terminal of the state, thus changing the line control mode.

In this case also, as in the operational example 6, the network interface 1011 detects a state of the line control unit 1012 by the periodic state monitoring between the line control unit 1012 and the network interface 1011. The line control mode is changed by notifying of the change in state also when reverting to the normal state.

To describe it in further depth, the computer terminal 1 checks the state by performing the periodic communications between the network interface 1011 and the line control unit 1012. The network interface 1011 is operable by a power supply (e.g., a power supply from the network 100, a local AC power supply, etc.) different from the power supply by which the computer terminal body is operated.

In this case, if the line control unit 1012 becomes inoperable due to the cut-off of the power supply of the computer terminal 1, the network interface 1011 detects an abnormal state because of no response from the line control unit 1012, and gives a notification of fault of the computer terminal 1 to the line control unit 1012 of other computer terminals 2.

Thereafter, if the communication (such as a telephone call) occurs on the line CL connected to the computer terminal 1, the computer terminal 1 is incapable of controlling the line and is therefore ruled out of the category of the control-assigned terminal in the management table 1015 shown in FIG. 2, and the same line 1 may be controlled by the line control unit 1012 of other computer terminal 2. After being restored, the network interface 1011 of the computer terminal 1 re-notifies of the restoration the line control units 1012 of the respective computer terminals, and the computer terminal 1 thus becomes a control-assigned terminal.

MODIFIED EXAMPLE

In the communication line control system described above, the centralized management terminal 102 has the different configuration from the computer terminal 101, however, it may also be feasible to take the same configuration oriented beforehand to the centralized management. The illustration of the network interface for the communications between the line control units of the respective terminals via the different network (LAN, PBX), is herein omitted. The number of the communication lines accommodated in each of the terminals may be different or the same. The network 100 may be constructed of an intercommunication network such as PBX.

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Although only a few embodiments of this invention have been described in detail above, those skilled in the art will readily appreciate that many modifications are possible in the preferred embodiments without departing from the novel teachings and advantages of this invention. Accordingly, all such modifications are intended to be included within the scope of this invention as defined by the following claims.

What is claimed is:

1. A communication line control method comprising:

providing a plurality of communication terminal devices each incorporating communication functions containing voice communications and data communications, accommodating a plurality of communication lines connected to a network, and capable of controlling an arbitrary call;

causing, if said plurality of communication terminal devices forming a plurality of groups and when a control request with respect to a specified call is made on an arbitrary communication terminal device within one group or when a state of the call changes, a line control unit of said arbitrary communication terminal device to give broadcasting notifications of a change in control reservation state with respect to the specified call to said line control units of said plurality of communication terminal devices within other groups; causing said line control unit of said arbitrary communication terminal device, after receiving acknowledgements about the control reservation state from said line control units, having received the broadcasting notifications, of said communication terminal devices within other groups, to give a right of control of the call to a distributed control module of said arbitrary communication terminal device that utilizes the communication lines; and

causing said distributed control module of said arbitrary communication terminal device to execute exclusive control between said communication terminal devices within other groups by unifying the states about the specified call between said communication terminal devices of other groups without being aware of the communication lines.

2. A communication line control method comprising:

providing a plurality of communication terminal devices each incorporating communication functions containing voice communications and data communications, accommodating a plurality of communication lines connected to a network, and capable of controlling an arbitrary call;

setting one arbitrary communication terminal device as a centralized management communication terminal device of which a line control unit manages in centralization said other communication terminal devices; allocating, when controlling a specified call by said other communication terminal devices, a right of control to said other communication terminal devices by said centralized management communication terminal device on the basis of preset control data;

causing a distributed control module of said arbitrary communication terminal device to execute exclusive control between said other communication terminal devices that utilize the communication by unifying the states about the specified call between said other communication terminal devices without being aware of the communication lines;

monitoring a processing load within a self communication terminal device and a load on the communication line in said line control unit of each of said communication